

REMARKS

Favorable reconsideration and allowance of the claims of the present application are respectfully requested.

Before addressing the specific grounds of rejection raised in the present Office Action, applicants have amended Claims 1 and 10 to positively recite that the gate comprising Re contains no halogens therein. Support for this amendment to Claims 1 and 10 is found, for example, in paragraphs 0003, 0004, 0012, and 00040. Applicants note in this regard that the claimed Re gate is formed by CVD using a $\text{Re}_2(\text{CO})_{10}$ precursor. Since no source of halogen is present, the resultant Re film formed by such a technique contains no halogens.

Since the above amendment to Claims 1 and 10 does not introduce new matter into the specification of the instant application, entry thereof is respectfully requested.

Claims 1, 2, 5, 7-11 and 14-16 stand rejected under 35 U.S.C. § 103 as allegedly unpatentable over U.S. Patent No. 6,300,208 to Talwar et al. ("Talwar et al."). Claims 1, 2, 4, 7-11 and 13-16 stand rejected under 35 U.S.C. § 103 as allegedly unpatentable over the combined disclosures of U.S. Patent Application Publication No. 2001/0032995 to Maria et al. ("Maria et al.") and Talwar et al.

Applicants respectfully submit that Talwar et al., alone, or Maria et al. in combination with Talwar et al. do not render the claimed structures obvious. Specifically, Talwar et al., alone, or the combination of Maria et al. and Talwar et al., do not teach or suggest a structure including a Re gate electrode wherein the Re gate electrode does not contain halogens, as presently claimed. Applicants observe that Talwar et al. disclose Re gate electrodes that are formed via many different techniques. CVD, PVP and PECVD are specific deposition processes mentioned in Talwar et al. that can be used in forming the Re gate electrode. Although Talwar

et al. mention that the Re gate can be formed by CVD, the applied reference fails to disclose the precursor used in forming such a Re gate. Absent of such a disclosure, one must assume that the Re gate electrode disclosed in Talwar et al. was formed from a conventional Re-containing precursor such as one including a halogen. As mentioned in the present application when Re halides are used as the precursor, halogen becomes incorporated into the gate electrode. As such, the claims of the present application are not rendered obvious from the disclosure of Talwar et al.

With respect to the combination of Maria et al. and Talwar et al., applicants submit that Maria et al. is defective in that it does not teach or suggest the use of a Re gate electrode, let alone the claimed Re gate electrode that contains no halogen. Instead, Pt is disclosed in Maria et al. as the gate electrode material.

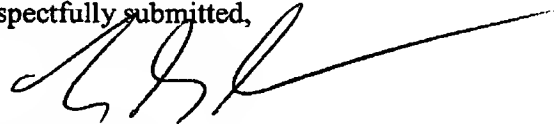
This aforementioned defect in Maria et al. is not obviated by the disclosure of Talwar et al. since the applied secondary reference also does not teach or suggest a Re gate electrode that contains no halogen, as presently claimed. Applicants again observe that Talwar et al., disclose Re gate electrodes that are formed via many different techniques. CVD, PVP and PECVD are specific deposition processes that can be used in forming the Re gate electrode. Although Talwar et al. mention that the Re gate can be formed by CVD, the applied reference fails to disclose the precursor used in forming such a Re gate. Absent of such a disclosure, one must assume that the Re gate electrode disclosed in Talwar et al. was formed from a conventional Re-containing precursor such as one including a halogen. As mentioned in the present application when Re halides are used as the precursor, halogen becomes incorporated into the gate electrode. As such, the claims of the present application are not rendered obvious from the combined disclosures of Maria et al. and Talwar et al.

The various § 103 rejections also fail because there is no motivation in the applied references which suggest modifying the disclosed structures to include the various elements, particularly the non-halogen-containing Re gate electrode, recited in the claims of the present invention. Thus, there is no motivation provided in the applied references, or otherwise of record, to make the modification mentioned above. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Vaeck, 947 F.2d, 488, 493, 20 USPQ 2d. 1438, 1442 (Fed.Cir. 1991).

The rejections under 35 U.S.C. § 103 have been obviated; therefore reconsideration and withdrawal thereof is respectfully requested.

Thus, in view of the foregoing amendments and remarks, it is firmly believed that the present case is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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